

Figure 4. Rock Cross Vane. (2.a.vi.G)

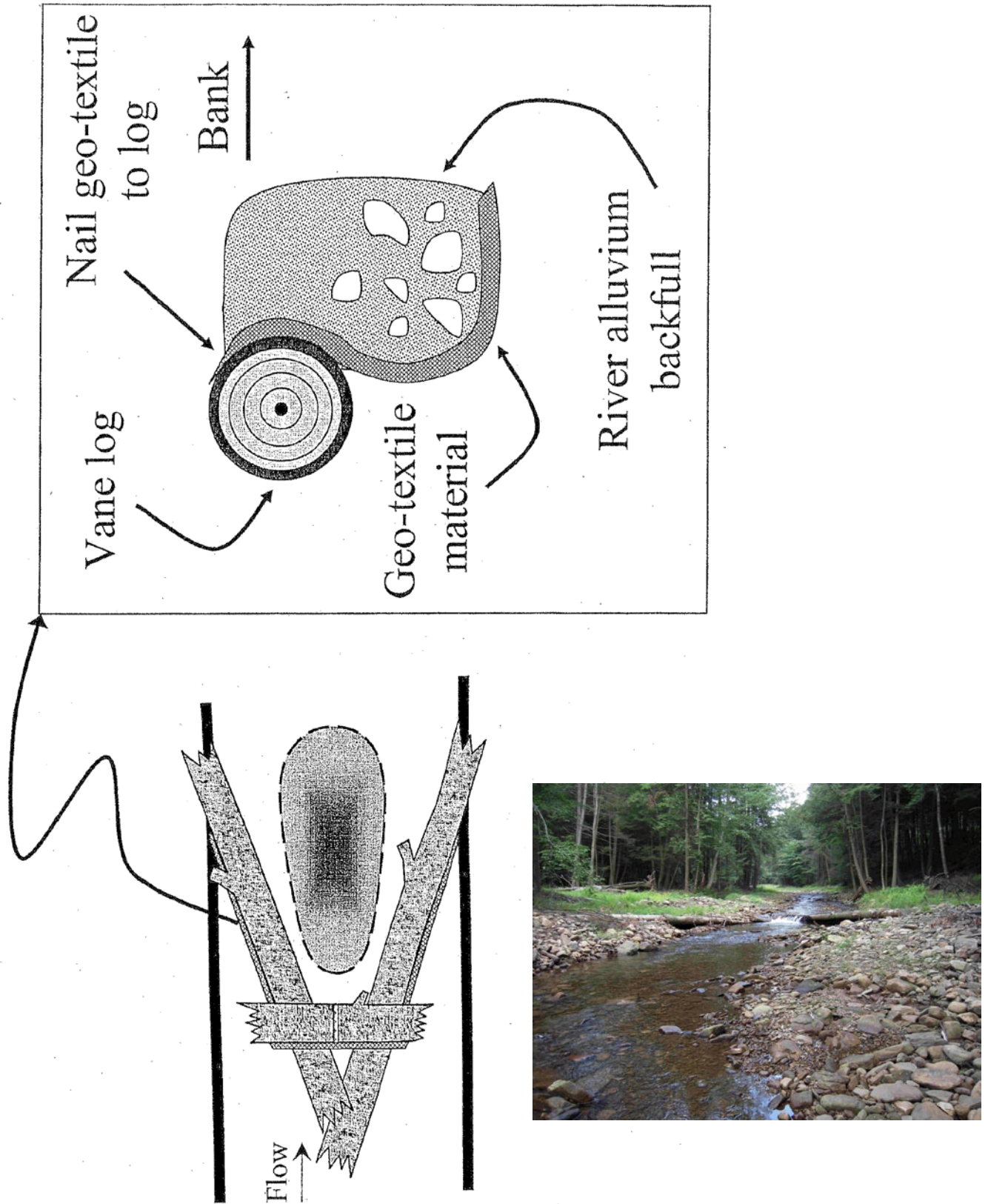


Figure 5. Log Cross Vane. (2.a.vi.G)

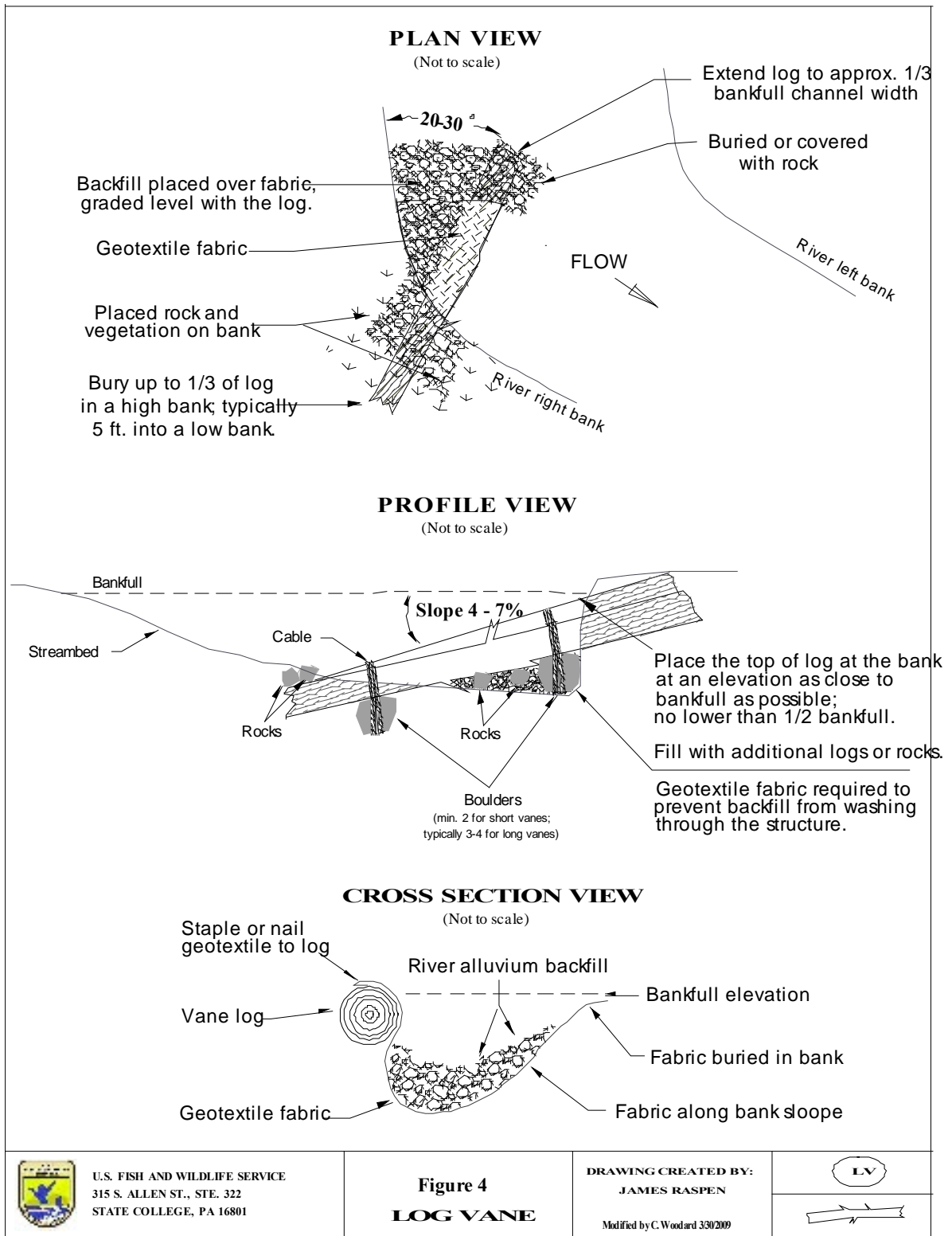


Figure 6. Log Vane. (2.a.vi.G)

MUD SILL DETAILS

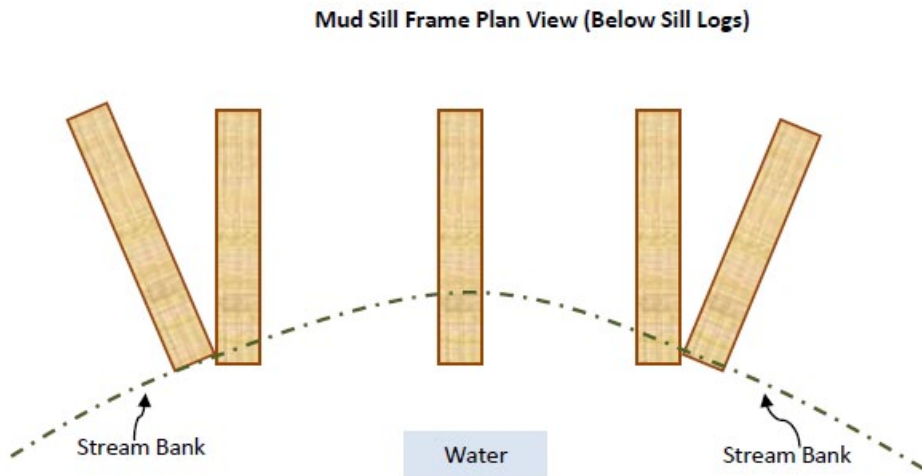
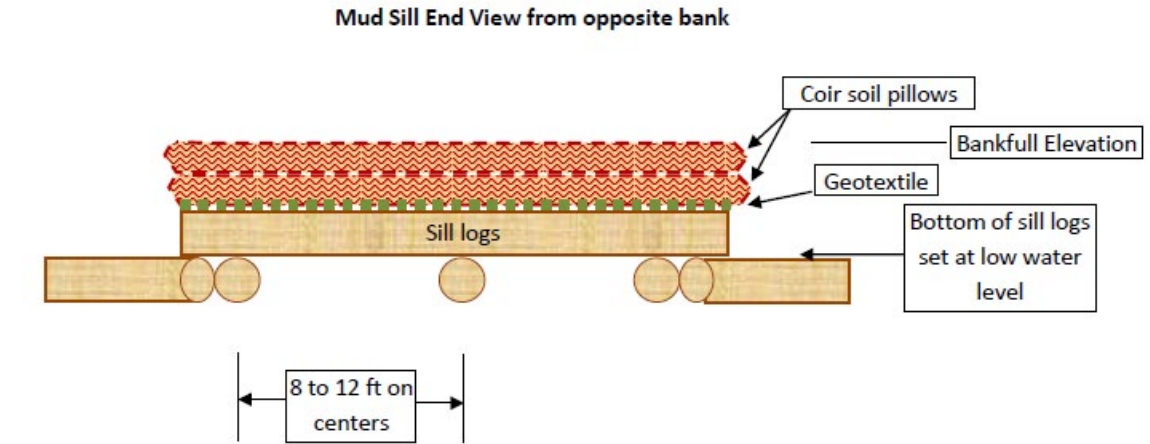
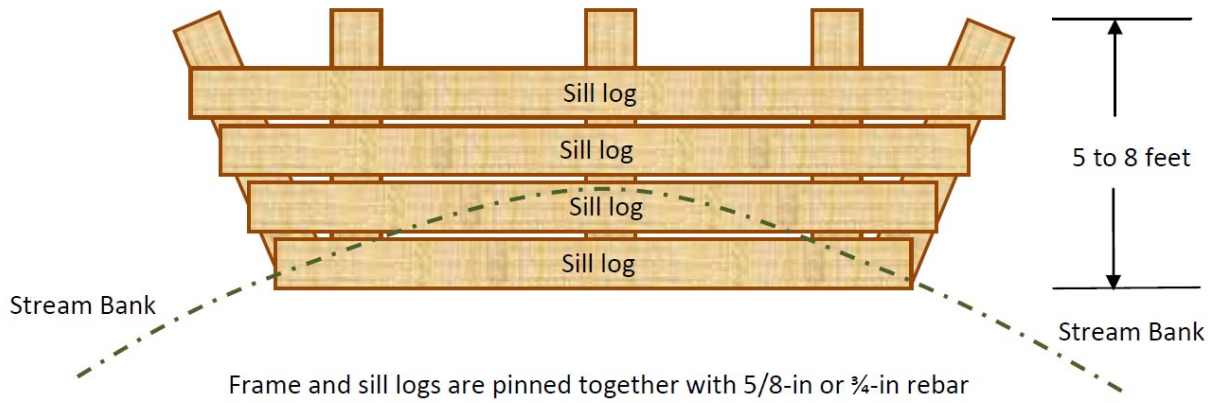


Figure 7a. Mud Sill. (2.a.vi.G)

Mud Sill Plan View (without Coir Soil Pillows above)



Coir Soil Pillow Details (end view)

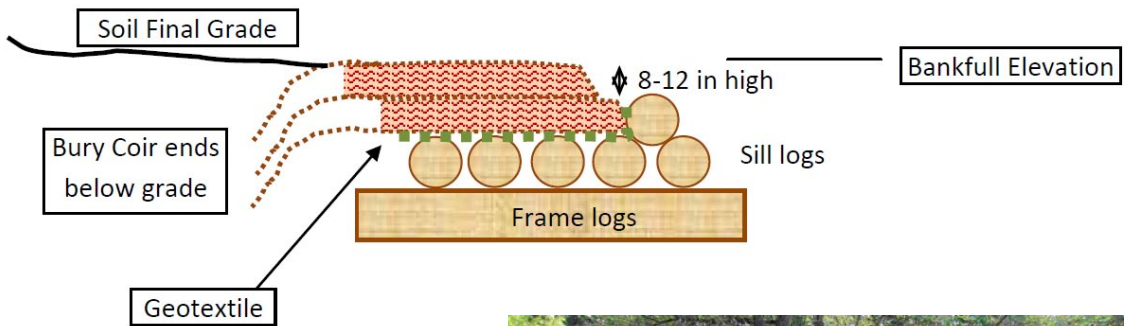
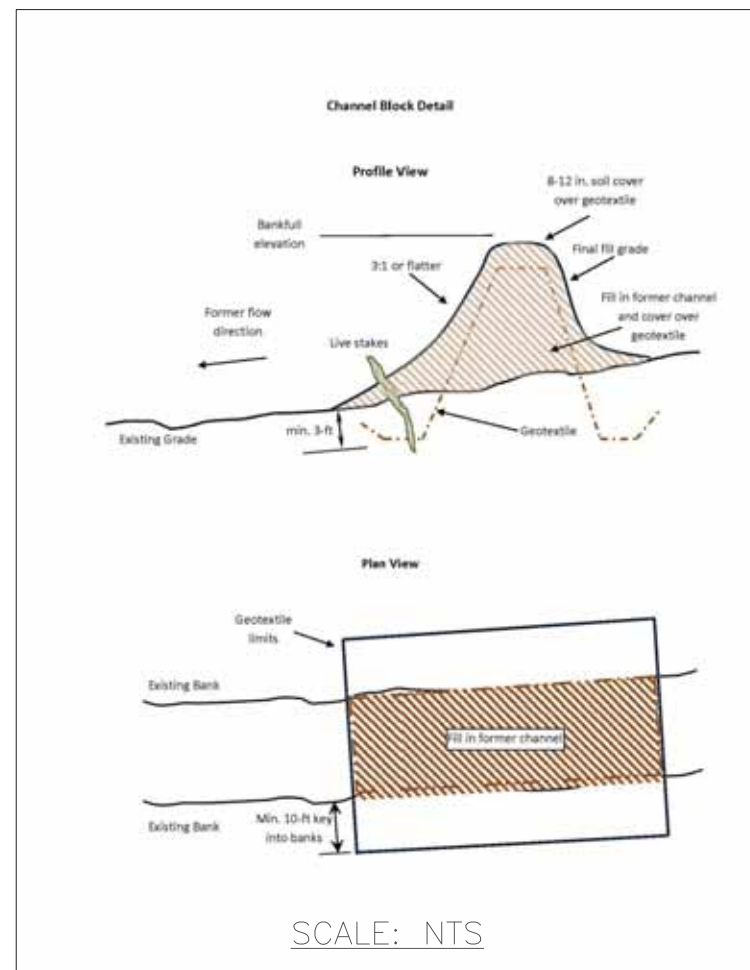


Figure 7b. Mud Sill. (2.a.vi.G)

MUD SILL CONSTRUCTION SEQUENCE

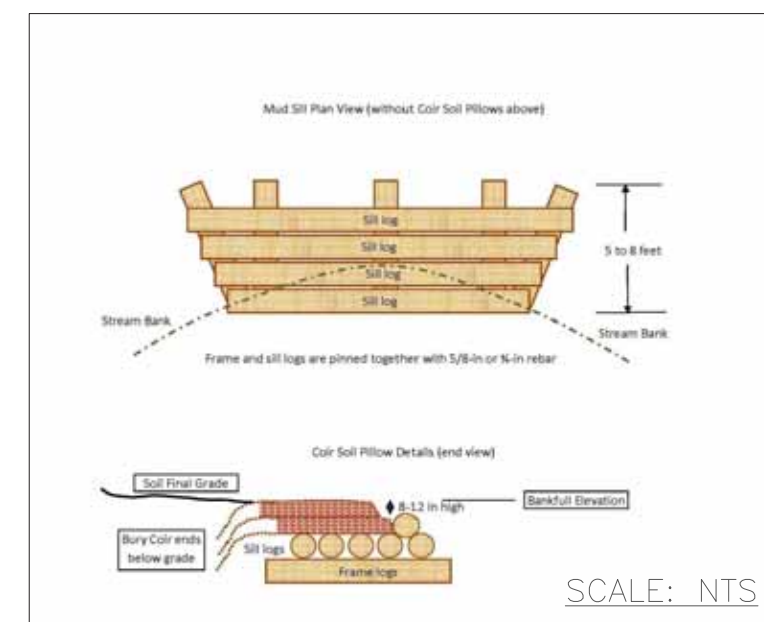
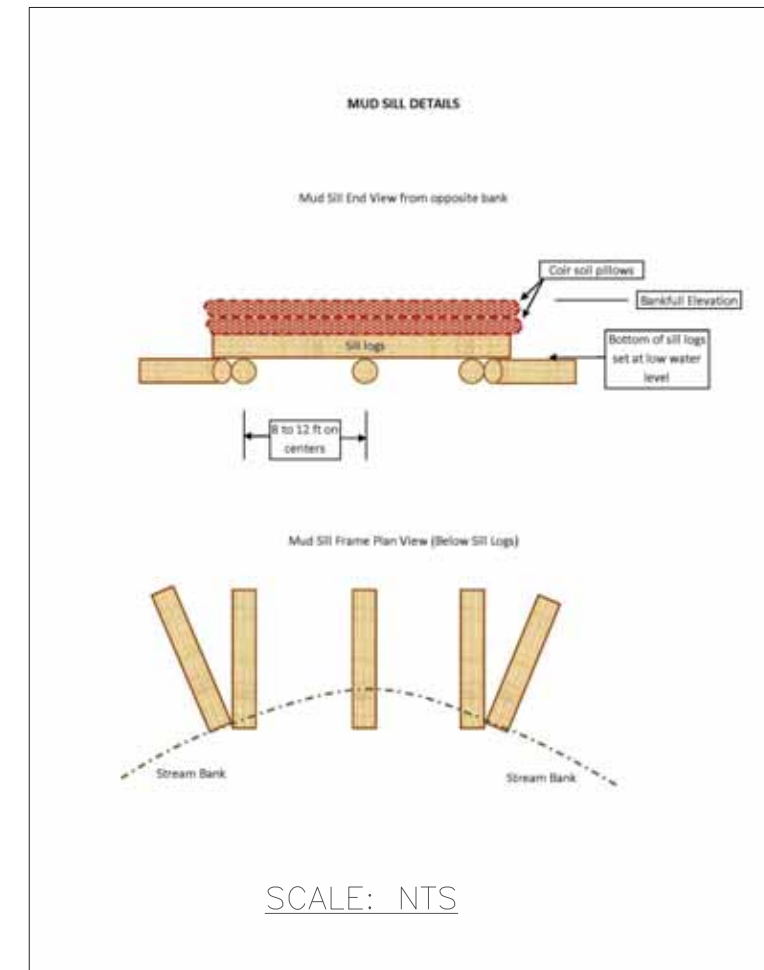
- EXCAVATE TRENCHES FOR FRAME LOGS, SLOPING AWAY, DOWNWARD FROM THE CHANNEL.
- SET FRAME LOGS WITH TOP ELEVATION 0.5ft ABOVE CHANNEL THALWEG INVERT.
- EXCAVATE BETWEEN THE SILL LOGS TO A DEPTH OF APPROXIMATELY 0.5 – 1.0ft BELOW THE CHANNEL THALWEG (INVERT).
- SET SILL LOGS OVER FRAME LOGS. PIN THEM IN PLACE WITH MINIMUM LENGTH 42in, $\frac{5}{8}$ in OR $\frac{3}{4}$ in REBAR HAMMERED INTO PRE-DRILLED HOLES (3ft ON CENTER). HOLES ARE ANGLED OFF THE VERTICAL, AND IN ALTERNATING DIRECTIONS (UPSTREAM, DOWNSTREAM).
- EXCAVATE TRENCH FOR COIR KEY TOWARDS THE LANDWARD SIDE OF THE STRUCTURE. SET ONE EDGE OF COIR INTO THE TRENCH.
- LAY THE COIR OVER THE SILL LOGS.
- PLACE 0.5 TO 1.0ft OF SOIL ON TOP OF THE COIR MAT. IF THIS IS THE TOP COIR PILLOW, SEED IT ACCORDINGLY. FOLD BACK THE COIR MAT TO COVER THE SOIL AND BACK INTO THE TRENCH. ADDITIONAL COIR SOIL PILLOW AS NECESSARY. BACKFILL THE TRENCH.
- THE TOP OF THE MUD SILL SHOULD BE AT THE BANKFULL ELEVATION.

DETAILS COURTESY DAVE PUTNAM, USF&WS



CHANNEL BLOCK CONSTRUCTION SEQUENCE

- BACKFILL WITH EXCAVATED MATERIAL A MOUND WITH 3:1 OR FLATTER SIDE SLOPES TO WITHIN 8 TO 12in OF THE TOP OF BANK. COMPACT EVERY 12in LIFT BY TRACK WALKING WITH EXCAVATOR OR WITH PLATE COMPACTOR.
- EXCAVATE TRENCHES PERPENDICULAR TO THE CHANNEL, A MINIMUM OF 3ft BELOW THE EXISTING THALWEG, AND A MINIMUM OF 10ft INTO THE EXISTING BANKS (STARTING FROM THE TOP OF THE EXISTING BANK).
- COVER THE MOUND INTO THE TRENCHES WITH GEOTEXTILE.
- COVER THE GEOTEXTILE WITH 8 TO 12in OF SOIL, UNTIL TOP OF CHANNEL BLOCK IS EVEN WITH TOP OF BANK.
- PLANT LIVE STAKES ON THE DOWNSTREAM SIDE OF THE CHANNEL BLOCK IN THE GEOTEXTILE KEY TRENCH.
- SEED AND PLANT THE CHANNEL BLOCK ACCORDING TO THE PLANTING PLAN SPECS. REFER TO THE EROSION AND SEDIMENT CONTROL PLAN REPORT FOR SPECS.



Rev.	Date	Description
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U.S. ARMY ENGINEER DISTRICT, PHILADELPHIA CORPS OF ENGINEERS, PENNSYLVANIA	Designed by: [Name]	Checked by: [Name]	Reviewed by: [Name]	Submitted by: [Name]	Chief, Arch. Branch
PHILADELPHIA	Drawn by: [Name]	Scale: [Scale]	Quadrangle Name: [Name]	File Name: [Name]	Plot Name: [Name]
10/15/2010	10/15/2010	10/15/2010	10/15/2010	10/15/2010	10/15/2010

SOUTHAMPTON CREEK ECOSYSTEM RESTORATION
BUCKS COUNTY, PENNSYLVANIA
100% DESIGN
MUD SILL AND CHANNEL BLOCK DETAILS